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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,812

04/24/2006

Nobuyuki Kojima

CANO:336

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EXAMINER

ROSENAU, DEREK JOHN

ART UNIT

PAPER NUMBER

2834

MAIL DATE

DELIVERY MODE

01/09/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/576,812	<b>Applicant(s)</b> KOJIMA ET AL.	
	<b>Examiner</b> Derek J. Rosenau	<b>Art Unit</b> 2834	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/24/06 7/20/06 11/2/07</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. Figures 12 and 13 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 1 and 11, it is unclear to which surface "other surface" is meant to refer. For purposes of examination, the "other surface" will be interpreted as the surface opposite the "one surface".

4. Claims 5 and 6 recite the limitation "the vibrator". There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Narisawa et al. (US 5672930).

7. With respect to claim 1, Narisawa et al. discloses a vibration wave driven apparatus (Fig 14A) comprising: a driven member (item 16); an elastic member (item 11a) having one surface opposed to said driven member, and another surface (Fig 14A), said elastic member having a plurality of contacting parts (items 11b and 11c) formed on the one surface and disposed in contact with said driven member formed of a single member (Fig 14A); and an electromechanical conversion element (items 12 and 13) joined to the other surface of said elastic member (Fig 14A); wherein at least one of said elastic member and said electromechanical conversion element has a portion thereof opposed to said driven member (Fig 14A), said portion having at least one recessed part formed therein at a location other than said contact parts (region between contacting parts), whereby said elastic member is disposed in contact with said driven member at said contact parts (Fig 14A).

8. With respect to claim 2, Narisawa et al. discloses a vibration wave apparatus according to claim 1, wherein said elastic member has a second portion not opposed to said driven member, said second portion being flush with said contact parts (Fig 14A). In Figure 14A, it can be seen that portions of the contacting parts extend beyond the edges of the driven member; therefore, these portions are not opposed to the driven member and are also flush with the contacting parts.

9. With respect to claim 3, Narisawa et al. discloses a vibration wave apparatus according to claim 1, wherein said elastic member is formed from a metal plate material (column 8, lines 38-41). The limitation "by press bonding or by an etching process" is a product-by-process limitation. It has been held that if a product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process (*In re Thorpe*, 227 USPQ 964).

10. With respect to claim 4, Narisawa et al. discloses a vibration wave apparatus according to claim 1, wherein said electromechanical conversion element comprises a laminated piezoelectric element having piezoelectric materials (items 12a-1 and 13a-1) and electrode materials (items 12b-1 and 13b-1) alternately laminate one upon another (Fig 12, 13, and 4A).

11. With respect to claim 5, Narisawa et al. discloses a vibration wave apparatus according to claim 1, wherein said elastic member includes a plurality of second recessed parts for adjusting vibration characteristics of the vibrator formed therein at a plurality of locations thereof (Fig 14A). Here, the plurality of second recessed parts can

be interpreted as the recessed portions to the left of the left contacting part and to the right of the right contact part. The limitation "for adjusting vibration characteristics of the vibrator" is functional language that does not define structure. In addition, the presence of the recessed portions provides for an adjustment in the vibration characteristics of the vibrator, as the size of the recessed portions results in a change in mass, which cause a change in frequency and amplitude characteristics.

12. With respect to claim 6, Narisawa et al. discloses a vibration wave apparatus according to claim 1, wherein said elastic member has at least one supporting part integrally formed thereon, for supporting the vibrator (Fig 14A, items 11b and 11c).

13. With respect to claim 7, Narisawa et al. discloses a vibration wave apparatus according to claim 1, wherein said electromechanical conversion element excites said elastic member in a plurality of out-of-plane bending vibration modes having different wavelength directions (column 3, lines 9-23).

14. With respect to claim 8, Narisawa et al. discloses a vibration wave apparatus according to claim 7, wherein said plurality of contact parts are formed in a vicinity of loops of one of the bending vibration modes and in a vicinity of nodes of another one of the bending vibration modes (Figs 9A-9D).

15. With respect to claim 9, Narisawa et al. discloses a vibration wave apparatus according to claim 1, wherein said contact parts have at least one space formed in a surface thereof opposed to said electromechanical conversion element (Fig 14A, region between contacting parts 11b and 11c).

16. With respect to claim 10, Narisawa et al. discloses a vibration wave apparatus according to claim 1. The claim language "wherein said drive member and said elastic member form a magnetic circuit" is a functional limitation, and does not, by itself, define further structure. As Narisawa et al. discloses each of the claimed structural elements, it would inherently perform the same function, and the drive member and elastic member would form a magnetic circuit.

17. With respect to claim 11, the subject matter therein is merely the combination of that of claims 1 and 7; therefore claim 11 is anticipated by Narisawa et al. for the same reasons as above.

18. With respect to claims 12-17, the subject matter therein is the same as that of claims 3-6, 8, and 9 respectively; therefore, claims 12-17 are anticipated by Narisawa et al. for the same reasons as above.

19. Claims 1, 2, 4-11, and 13-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Maruyama et al. (US 2005/0104476).

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

20. With respect to claim 1, Maruyama et al. discloses a vibration wave driven apparatus (Fig 7) comprising: a driven member (item 33); an elastic member (item 31) having one surface opposed to said driven member, and another surface (Fig 7), said elastic member having a plurality of contacting parts (item 31-1) formed on the one surface and disposed in contact with said driven member formed of a single member (Fig 7); and an electromechanical conversion element (items 30) joined to the other surface of said elastic member (Fig 7); wherein at least one of said elastic member and said electromechanical conversion element has a portion thereof opposed to said driven member (Fig 7), said portion having at least one recessed part formed therein at a location other than said contact parts (item 31-3), whereby said elastic member is disposed in contact with said driven member at said contact parts (Paragraph 91).

21. With respect to claim 2, Maruyama et al. discloses a vibration wave apparatus according to claim 1, wherein said elastic member has a second portion not opposed to said driven member (item 31-2), said second portion being flush with said contact parts (Fig 7).

22. With respect to claim 4, Maruyama et al. discloses a vibration wave apparatus according to claim 1, wherein said electromechanical conversion element comprises a laminated piezoelectric element having piezoelectric materials (item 22) and electrode materials (items 23-1, 23-2, and 23-3) alternately laminate one upon another (Fig 5).

23. With respect to claim 5, Maruyama et al. discloses a vibration wave apparatus according to claim 1, wherein said elastic member includes a plurality of second



recessed parts for adjusting vibration characteristics of the vibrator formed therein at a plurality of locations thereof (Fig 7, items 31-4).

24. With respect to claim 6, Maruyama et al. discloses a vibration wave apparatus according to claim 1, wherein said elastic member has at least one supporting part integrally formed thereon, for supporting the vibrator (Fig 7, bottom surface of the vibrator).

25. With respect to claim 7, Maruyama et al. discloses a vibration wave apparatus according to claim 1, wherein said electromechanical conversion element excites said elastic member in a plurality of out-of-plane bending vibration modes having different wavelength directions (Figs 8A and 8B).

26. With respect to claim 8, Maruyama et al. discloses a vibration wave apparatus according to claim 7, wherein said plurality of contact parts are formed in a vicinity of loops of one of the bending vibration modes and in a vicinity of nodes of another one of the bending vibration modes (Paragraph 75).

27. With respect to claim 9, Maruyama et al. discloses a vibration wave apparatus according to claim 1, wherein said contact parts have at least one space formed in a surface thereof opposed to said electromechanical conversion element (Fig 7, item 31-3).

28. With respect to claim 10, Maruyama et al. discloses a vibration wave apparatus according to claim 1. The claim language "wherein said drive member and said elastic member form a magnetic circuit" is a functional limitation, and does not, by itself, define further structure. As Maruyama et al. discloses each of the claimed structural elements,

it would inherently perform the same function, and the drive member and elastic member would form a magnetic circuit.

29. With respect to claim 11, the subject matter therein is merely the combination of that of claims 1 and 7; therefore claim 11 is anticipated by Maruyama et al. for the same reasons as above.

30. With respect to claims 13-17, the subject matter therein is the same as that of claims 4-6, 8, and 9 respectively; therefore, claims 13-17 are anticipated by Maruyama et al. for the same reasons as above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek J. Rosenau whose telephone number is 571-272-8932. The examiner can normally be reached on Monday thru Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

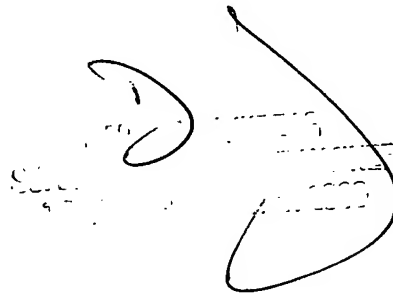
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Derek J Rosenau  
Examiner  
Art Unit 2834

DJR  
1/4/2008

A handwritten signature, likely of the examiner Derek J. Rosenau, is written in black ink. Below the signature, the date "1/4/2008" is handwritten. The signature is stylized and somewhat cursive.